

**In the Drawings**

Please replace Figures 2, 4A, 4B, 5A and 5B with the attached replacement sheets of  
Figures 2, 4A, 4B, 5A and 5B.

### REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Claims 1-43 remain pending. Claims 1-43 have been rejected.

Claim 34 has been amended. No claims have been cancelled. No claims have been added. Support for the amendments is found in the specification, the drawings, and in the claims as originally filed. Applicant submits that the amendments do not add new matter.

Applicant reserves the rights with respect to the applicability of the Doctrine of Equivalents.

### Objections to the Drawings

The Examiner has objected Figures 2, 4A, 4B, 5A, and 5B as failing to comply with 37 C.F.R. 1.84 (p)(4). The Examiner has objected Figure 5A as failing to comply with 37 C.F.R. 1.84 (p)(5).

Applicant submits herewith replacement sheets of corrected Figures 2, 4A, 4B, 5A and 5B in compliance with 37 C.F.R. 1.121(d).

The Examiner has objected Figures 4A, 4B, and 5B as failing to comply with 37 C.F.R. 1.84 (p)(5).

Applicant has amended the Specification to add the reference characters in the description in compliance with 37 C.F.R. 1.121(b).

Applicant respectfully requests withdrawal of the objections.

### Rejections Under 35 U.S.C. § 112

Claim 34 has been rejected under 35 U.S.C. §112, second paragraph, for failing to provide proper antecedent basis.

Applicant has amended claim 34 to overcome the Examiner's rejection.

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**Rejections Under 35 U.S.C. § 102**

Claims 1-12, 15-22 and 36-43 stand rejected under 35 U.S.C. § 102(b) as being taught by Dirk Grunwald, et al., "Confidence Estimation for Speculation Control", IEEE (c) 1998 ("Grunwald").

Claim 1 reads as follows:

a first circuit to store a global confidence history;  
a second circuit to store a global prediction value history;  
a first index function to produce a first index signal from said global confidence history; and  
a first pattern history table to retrieve a value responsive to said first index signal.

(emphasis added)

Grunwald discloses confidence estimators for assessing quality of a branch prediction by a number of branch predictors (Abstract, Section 1, paragraphs 2-3). More specifically, Grunwald discloses the confidence estimators that have the index computed using the branch history register (Section 3, paragraph 2, Section 3.2.1, paragraph 1).

Thus, Grunwald merely discloses the confidence estimator that has the index computed using the history of branch prediction. In contrast, claim 1 refers to a first circuit to store a global confidence history; and a first index function to produce a first index signal from the global confidence history.

Because Grunwald fails to disclose all limitations of claim 1, Applicant respectfully submits that claim 1 is not anticipated by Grunwald under 35 U.S.C. § 102(b).

Given that claims 2-43 contain related limitations, Applicant respectfully submits that claims 2-43 are not anticipated by Grunwald under 35 U.S.C. § 102(b).

**Rejections Under 35 U.S.C. § 103**

Claims 13-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Grunwald, as applied to claim 1 respectively above, and further in view of U.S. Patent No. 5,758,142 to McFarling, et al. ("McFarling").

It is respectfully submitted that Grunwald does not teach or suggest a combination with McFarling, and McFarling does not teach or suggest a combination with Grunwald. Grunwald teaches confidence estimators (Abstract, Section 1, paragraphs 2-3). McFarling, in contrast, teaches an instruction outcome predictor which chooses between two or more instruction predictors (Abstract). It would be impermissible hindsight, based on Applicant's own disclosure, to combine Grunwald and McFarling.

Furthermore, even if Grunwald and McFarling were combined, such a combination would lack the following limitations of claim 1: a first circuit to store a global confidence history; and a first index function to produce a first index signal from the global confidence history.

Therefore, Applicant respectfully submits that claim 1 is not obvious under 35 U.S.C. § 103(a) over Grunwald in view of McFarling.

Given that claims 13-14 depend from claim 1, and add additional limitations, Applicant respectfully submits that claims 13-14 are not obvious under 35 U.S.C. § 103(a) over Grunwald in view of McFarling.

Claims 23-33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Grunwald, in view of Free On-Line Dictionary of Computing ("FOLDOC").

It is respectfully submitted that Grunwald does not teach or suggest a combination with FOLDOC, and FOLDOC does not teach or suggest a combination with Grunwald. Grunwald teaches confidence estimators (Abstract, Section 1, paragraphs 2-3) FOLDOC, in contrast,

teaches a general definition of a computer. It would be impermissible hindsight, based on Applicant's own disclosure, to combine Grunwald and FOLDOC.

Furthermore, even if Grunwald and FOLDOC were combined, such a combination would lack the following limitations of claim 23: a first circuit to store a global confidence history, a first index function to produce a first index signal from said global confidence history.

Therefore, Applicant respectfully submits that claim 23 is not obvious under 35 U.S.C. § 103(a) over Grunwald in view of FOLDOC.

Given that claims 24-33 depend from claim 23, and add additional limitations, Applicant respectfully submits that claims 24-33 are not obvious under 35 U.S.C. § 103(a) over Grunwald in view of FOLDOC.

Claims 34-35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Grunwald in view of Free-On-Line Dictionary of Computing ("FOLDOC"), and further in view of McFarling.

It is respectfully submitted that Grunwald does not teach or suggest a combination with FOLDOC and McFarling, FOLDOC does not teach or suggest a combination with Grunwald and McFarling, and McFarling does not teach or suggest a combination with Grunwald and FOLDOC. Grunwald teaches confidence estimators (Abstract, Section 1, paragraphs 2-3) FOLDOC, in contrast, teaches a general definition of a computer. McFarling, in contrast to FOLDOC and Grunwald, teaches an instruction outcome predictor, which chooses between two or more instruction predictors (Abstract). It would be impermissible hindsight, based on Applicant's own disclosure, to combine Grunwald, McFarling, and FOLDOC.

Furthermore, even if Grunwald, FOLDOC, and McFarling were combined, such a combination would lack the following limitations of claim 23: a first circuit to store a global confidence history, a first index function to produce a first index signal from said global confidence history.

Therefore, Applicant respectfully submits that claim 23 is not obvious under 35 U.S.C. § 103(a) over Grunwald in view of FOLDOC.

Given that claims 34-35 depend from claim 23, and add additional limitations, Applicant respectfully submits that claims 34-35 are not obvious under 35 U.S.C. § 103(a) over Grunwald in view of FOLDOC, and further in view of McFarling.


### Conclusion

It is respectfully submitted that in view of the amendments and arguments set forth herein, the applicable rejections and objections have been overcome. If there are any additional charges, please charge Deposit Account No. 02-2666 for any fee deficiency that may be due.

Respectfully submitted,

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Date: August 28, 2006

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